simple œdema cannot occur in the larynx, as it does undoubtedly from debility in other portions of the body, while the arguments advanced in proof, without exception, are either wanting in force, contradictory, or unsustained on true physiological grounds.

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Art. III.—*Cases of Rupture of the Womb, with remarks: being a Sequel to a Monograph upon this subject, in this Journal for January and April,* 1848. By James D. Trask, A. M., M. D., of White Plains, New York.

In a paper published in the Nos. of this Journal for January and April, 1848, we presented an analysis of three hundred and three cases of rupture of the womb. Since its publication, we have obtained access to some authorities which were not then within reach, especially the essay of Duparque; and we have gathered, from this and other sources, over a hundred cases additional to those embraced in our previous communication. We have thought that a brief analysis of such of these cases as have been already published, and a somewhat more extended history of several cases which have been communicated to us, might prove useful as an addition to what has already been presented. We propose to give a summary of the results of these and of the cases in the former paper, taken as a whole. It is possible that, in some instances, the same case may be reported more than once, in consequence of the occasional imperfections of the references, though great care has been taken to avoid this source of error.

*Rupture during Pregnancy. Recoveries.*

Case CCCIV. A woman had the abdomen and womb torn open, transversely, by the horns of a bull. The child escaped from the aperture, with a large quantity of blood. It was not until an hour afterwards that the funis was cut. It lived eight hours, and the mother recovered perfectly in six weeks. (*Lechaptois*, par M. Deneux, *Essai sur les ruptures de la Matrice*, p. 35. See *Duparque*, p. 20.)

Case CCCV. In a case similar to the above, it was necessary to increase the size of the opening, in order to extract the contents of the uterus. Recovered completely in less than forty days. (Schmucker, *Melang. de Chirurg. Ancien. Journal de Méd.*, t. lxvi. p. 354. See *Duparque*, p. 21.)

Case CCCVI. At seven months she fell from a tree; motions of child ceased, and she suffered for a month. Four months afterward, felt a movable body in the abdomen; soon had bloody discharges, with some portions of hair; health good. Thirteen months from the fall, she was confined. Following the accouchement, an abcess formed, from which the remains of the first child escaped. Recovered perfectly. (M. Bochard, in *L'Ancien. Journ. de Méd.*, t. v. p. 42. See *Duparque*, p. 72.)

Case CCCVII. Æt. 27. Fifth month; second pregnancy; fell from a tree, and felt a tearing pain in the lower part of the abdomen; was confined to her bed for two months, and for five years had great irritation of the bladder. When fifty years old, she expelled a calculus from the bladder, formed around a bone; and soon after, twelve similar ones were withdrawn from an abscess below the neck of the bladder. She recovered. (M. Lessieux, *Extr. des Bull. de la Soc. Méd. d'Emulation*, 1822. See *Duparque*, p. 92.)

Case CCCVIII. Æt. 24 years. Had undergone Cæsarean section about three years previously. Was found with symptoms of bilious colic; five hours afterward, complained that she was "tearing in two," and said something had torn inside of her; the os was slightly patulous, and there was some hemorrhage from it. Upwards of forty-eight hours afterward, the fœtal heart was distinctly heard. In three weeks was about the house; vaginal discharges came on, with great constitutional irritation, and the fœtus was removed, by gastrotomy, three months and six days from the rupture. There was an opening through the uterine walls. Recovered. (H. A. Bizzell, *Amer. Journ. Med. Sci.*, Jan. 1856, p. 79.)

*Rupture during Pregnancy. Deaths.*

Case CCCIX was hurled into the air by the horns of a bull, her abdomen and uterus having been torn open. The child, escaping from the womb, fell upon the ground at the same instant with the mother; the child lived a month, the mother died in thirty-six hours. (Sue, *Essai Historique sur l'Art des Accouchement*, t. i. p. 209, from *Duparque*, p. 19.)

Case CCCX. Æt. 26 years. For three hours had had violent colic pains, with great restlessness; the face pale; skin covered with cold sweat; the pulse small and intermittent; belly not hard or tender. Her husband reported that she had missed her catamenia for three months, and had lately been indisposed; in the evening she ate cauliflowers, and at night was taken with colic, vomiting, &c. During this conversation she turned upon her side and died.

*Post mortem.*—Great effusion of blood; a fœtus of about *two* months had escaped from a rent in the left cornu of the uterus—edges of the rent thin and brittle—walls were four or five lines thick, excepting at the rupture, where, for the space of an inch, they were very thin. (M. Collineau, *Journ. Gen. de Méd.* See *Duparque*, p. 49.)

Case CCCXI. Æt. 30 years; mother of five children and had several miscarriages. When three months pregnant, made a misstep, and, in the effort to recover, felt violent pains in the womb and sinking; great prostration. After five days' repose, she got up, and was about the house for a month, when similar depressions returned, and she died in three days.

*Post mortem.*—A rent of one inch at the fundus, near the insertion of the right tube, corresponding with the situation of the placenta; womb contained a fœtus of three to four months. (J. B. Puzin, *Thèse*, 1809. See *Duparque*, p. 51.)

Case CCCXII. Æt. 30 years; three months pregnant; always had good health. While at her needle-work, she became faint and sick with sudden, intense pains in the stomach. When called, at 9 P. M., she was in extreme pains; nauseated; pulse small and feeble; had eaten heartily of tripe, a few hours before. Gave a full dose of opium. 11 P. M. Excessive depression; almost pulseless; dying evidently from internal hemorrhage; *now*, had occasional pains in back, but chiefly in stomach; no vaginal discharge. Died six hours from the attack.

*Post mortem.* Immense coagula; a *perfect ovum* protruding through a rent

in the uterus, which was firmly contracted; was about four months gone; uterus "excessively pale and soft, indeed, I could easily tear it asunder; rent antero-posterior, as regards the fundus; no cause could be ascertained." (F. H. Warren, *Lond. Med. Gaz.*, 1851, vol. ii. p. 1103.)

Case CCCXIII. Æt. 28 years; a single woman; slightly indisposed for some days; for last few hours had complained of pain in abdomen, and sickness, which became suddenly aggravated, when the physician was sent for, who found her in *articulo mortis*.

*Post mortem.*—About seven months pregnant; much blood in the cavity of the peritoneum; rent in fundus of womb four inches long, and gaping—the placenta prevented escape of the fœtus; womb "no thicker than a sheet of writing-paper for at least a distance of two inches around the rent; liquor amnii had not escaped. (J. Watson, *L. Lancet*, 1853, vol. i. p. 267.)

Case CCCXIV. Æt. 28. Admitted at full term; second pregnancy; good health. At seventh month she fell and shook herself violently, but no disturbance followed. Two weeks after admission, got vomiting, with restlessness; pretty strong pains followed, during one of which she felt a severe "crack in the back," as if something had given way inside; os nearly closed; pains ceased; died next day; no expulsive pains.

*Post mortem.*—In abdomen, blood; and a full-grown fœtus, dead several days. Rent from centre of fundus, posteriorly along whole length to the os; uterus seemed to be perfectly healthy; no softening; no appearance of previous inflammation; surrounding parts healthy; usual predisposing and exciting causes absent. (T. F. Brownbill, *Lond. Lancet*, 1848, vol. ii.)

Case CCCXV. Æt. 25. Eighth month; fell on a step, and struck the abdomen; she felt as if something had burst. Now the movements of the child could be felt on the right side, very close to the skin. Died on fourteenth day.

*Post mortem.* Rent at the fundus, on anterior surface, one inch below the summit, extending transversely from side, and from four to five inches in length, and great loss of blood; uterus and peritoneum of a dark green colour. (*Ingleby's Obstet. Med.*, p. 217.)

We have *eleven* additional cases of rupture during pregnancy, which, added to the *thirty-eight* previously reported, make *forty-nine* cases. Of these, Cases CCCIV, CCCV, CCCVI, CCCVII, CCCIX, and CCCXI, were of traumatic origin; in the remaining four, the accident was spontaneous. These, added to *six* among the above, make thirteen of traumatic origin.[1]

In Case CCCVIII, the remarkable fact is stated, that two days after the apparent occurrence of the rupture, the pulsations of the fœtus ceased to be heard.

*Recoveries at full term of Pregnancy.*

Case CCCXVI. Sixth labour; contracted pelvis. Seven hours and a half after escape of waters, the uterus was fully dilated; pains very powerful; and she complained of pains at right sacro-iliac junction. In a half hour, pains ceased entirely. Four hours after this, some hemorrhage; perforation attempted; delivery completed at end of four hours. Rent oblique, in direc-

[1] In Case XXVI, as we are informed by Dr. Bond, in a private communication, the patient's foot slipped, while she was leaning against a barrel, and that she came with a good deal of force against the barrel.

tion of right sacro-iliac junction; but little collapse. Recovered after many weeks. (*Dr. Ingleby's Obstet. Med.*, p. 212.)

Case CCCXVII. Was first seen after being in strong labour thirty-six hours; pains had suddenly ceased; os dilated; the fœtus partly in the peritoneal cavity, and high up. Delivered at once by turning. Rent on right side, from the cervix nearly to the fundus; placenta and coagula removed; very considerable depression; menstruation returned at the end of five months. (*Ibid.*, p. 214.)

Case CCCXVIII. Æt. 35. Primipara; extreme rigidity of os; pains strong for thirty-six hours, when the os being dilated to half a crown, and "hard as marble," with excessive violence of pains, the cervix was felt suddenly to give way to the touch, and to split asunder; delivery took place in a few minutes. (*Perfect's Cases*, vol. ii., CXLII.)

Case CCCXIX. After delivery in the usual way, the intestines could be very distinctly touched, having descended through a rent in the fundus. The surgeon replaced them, and held the hand in the womb until it was sufficiently contracted to prevent any further hernia of the bowels, and she recovered perfectly. (Rungius, *Instit. Chirurg.*, pars sec., p. 728. See *Duparque*, p. 167.)

Case CCCXX. Æt. 16½ years. Primipara. After three days of severe labour, the os partially dilated. Forceps were applied. After forcible traction, the head was suddenly forced into the pelvis. The cervix was torn from the vagina upwards. Recovered. (*Duparque*, p. 187.)

Case CCCXXI. The entire ovum passed into the peritoneal cavity. After many months, portions began to escape by the anus. After her death the remainder was found in contact with an ulceration into the colon. The rupture of the womb was nearly cicatrized. (M. Fleury, *Rec. pér de la Soc. de Méd. de Paris*, t. iv. p. 268. See *Duparque*, p. 235.

Case CCCXXII. Æt. 32 years; delicate; third pregnancy. Somewhere about twenty-four hours from beginning of labour, three accoucheurs separately attempted the application of forceps and version, occupying several hours. Eight hours after this, delivered by perforation, occupying three-fourths of an hour, with but slight fatigue. A rent detected to the right, and behind, at the junction of the vagina; recovered in a month. (*M. Lachapelle*, t. 111, p. 179. See *Duparque*, p. 288.)

Case CCCXXIII. Æt. 28 years; strong, well formed, primipara; had been in labour five days; waters escaped four days; many attempts at delivery by forceps and version; extreme prostration; perforation, with much difficulty in extraction; vagina separated from uterus in the whole of its posterior half. Recovered. (*Ibid.*)

Case CCCXXIV. In April, 1847, I was summoned in great haste to meet Dr. M. The patient was very fat, about 30 years old, and in labour with her seventh child. The pains had been severe, and then ceased, with a cry from the patient that something was the matter. The head receded; the pulse was 124, and she became restless. I passed my hand to the head; attempted to bring it down with forceps, and failed. I then passed in my left hand, and discovered a rent in the uterus opposite the *linea ileo pectinea*, of about four and a half inches, and the nates and feet had passed through it and among the abdominal viscera. I reached the feet, and delivered her. The placenta came away with the child. She recovered, and continued well for years, and died a year since in consequence of erysipelas. (*Communicated by Prof. Willard Parker.*)

Case CCCXXV. Æt. 42 years; large and corpulent; mother of nine;

unusual pain in uterus from one to two months; labour slow; pains strong, at long intervals. When os fully dilated, and head almost in perineum, she suddenly exclaimed, "What a cramp I have in my belly!" Expulsive pains ceased; an opiate given; great prostration; the head receded, and the child could be felt in the abdomen; was delivered with considerable difficulty. Rent oblique, from near the fundus toward the left; inflammation; recovery. (James Church, *L. Lancet*, vol. i., 1849.)

Case CCCXXVI. Æt. 37 years; muscular. When in labour six or eight hours, on getting into bed had a tremendous pain, and a loud-cracking sound heard; pains ceased, and she was believed to be dying, but as she was living six hours afterwards, Dr. P. was sent for. Extreme prostration, and child felt through the abdomen; delivered her easily by forceps. There was *hernia* of the intestines; intense inflammation followed, and she recovered with apparently but little care. (Dr. Prassart, from *Caspar's Wochenschrift*, 1847. See *Brit. and For. Med.-Chir. Rev.*, 1848, p. 279.)

Case CCCXXVII. Æt. 30 to 35 years; strong, primipara. The edges of the os thin, hard, and very rigid posteriorly; anteriorly congested, and an inch thick. After *thirty-five* hours of energetic labour, the neck was torn almost entirely off, and the head descended. A year afterward she had a second child, after a labour of ten minutes. (Dr. W. P. Johnston, *Amer. Journ. Med. Sci.*, April, 1851, p. 342.)

Case CCCXXVIII. Æt. 30; apparently very feeble; for two months had extreme anasarca; sixth child; os well dilated at the end of six hours; the back presenting, the breech was brought down, and after two hours of "very hard labour," the feet could be brought down; every prudent effort to deliver by the feet; attempts to perforate failed. The fœtus was dissected to the axillæ, occupying two hours, severe labour continuing Rupture was suspected; as she was rapidly sinking, *gastrotomy* was performed. The head and placenta were in the peritoneal cavity; inflammation treated by cal. and op. By the eighteenth day the wound was healed, and by the twenty-ninth day could attend to domestic duties. (Dr. H. M. Jeber, from *South. Med. and Surg. Journ.* in *Am. Journ. Med. Sci.*, April, 1851, p. 538.)

Case CCCXXIX. Primipara; æt. 30 years; bilious temperament; good health; eight months and one week gone. After twenty-eight hours of labour, head pressed on perineum; one hour after this she was restless, and got up; on returning to bed, she fell back into the chair, screaming "O, nurse!" Put her hand to the pit of the stomach, and gasped for breath; could not bear a recumbent posture; uterine tumour ill defined, and a swelling above it; the head impacted; delivery completed in forty minutes, the child living. The placenta was removed, "tremendous hemorrhage" followed, and the hand, when introduced, detected a *rent* at the upper right side of the fundus, antero-posteriorly admitting three fingers; no hernia; after thirty-five days, well. (Mr. Thomas, *Prov. Med. Journ.*, 1846, p. 613.)

Case CCCXXX. Æt. 38 years; fifth child; all previously born dead, and "cross-births." Called in consultation at 10½ A. M.; labour began at 4 A. M. She was seen immediately; the os was fully dilated; the pains regular, without any excessive strength. The breech presented to the left. About 8 A. M. the female genitals of the child were visible, and delivery was expected after a few pains. Suddenly he noticed the entire disappearance of the presenting part; the head had escaped into the peritoneal cavity. Dr. Gardner turned, the head was detained at the brim, the child was dead, and he perforated and delivered. The patient, by the great care of the attending physician, recovered. The laceration extended through the neck of the

uterus upward, and the *bladder* downward, and she will be shortly treated by Dr. Sims. Dr. G. attributed the recovery to the application of ol. terebinth. to the abdomen, which seemed to exert a magical effect. (*Communicated by Dr. A. K. Gardner, New York.*)

Case CCCXXXI. Æt. 30 years; delicate; third labour; previous labours severe and protracted. After something over twelve hours of moderately severe labour, the os was found rigid, and equalling a quarter of a dollar; head at superior strait. Two hours after this, after a pain of great severity, she complained suddenly of great abdominal distress, and the pains ceased. She was left from midnight till morning, when she was somewhat exhausted, and the head could not be felt. Ergot and stimulants given. Dr. G. was called in late in the afternoon; and found a rent upward and backward, the womb contracted, and no part of the child to be felt. He performed *gastrotomy*, the child having escaped twenty-one hours previously. Was about the house in seven weeks. (Dr. John T. Gilman, *Amer. Journ. Med. Sci.*, April, 1854, p. 401.)

Case CCCXXXII. Excellent constitution; sixth labour; pains came on about 8 P. M.; had been in labour about two hours and a half, with pains of increasing severity; the os fully open, and but slight advance of the head, when she went to stool, and there had two pains, the second causing intense agony and a burning sensation in the right side. She was certain that something had given way within her; head receded; rupture diagonal; all but the placenta was in the peritoneal cavity. Turning declined. Next morning, *gastrotomy*. Child hydrocephalic; rent enormous, and womb uncontracted. She was convinced that she should recover, and at the end of just a month she was at the wash-tub. (Dr. Mason, *Am. Journ. Med. Sci.*, Jan. 1855, p. 281.)

Case CCCXXXIII. Reached her after she had been in labour three days. She was pale and exhausted; had suffered no pain for more than twelve hours. The shoulder presented; there was a laceration of the neck of the womb, through which the head only had passed. Delivered her immediately, with little difficulty; expected she would die soon; she recovered, and in eighteen months afterwards was delivered of a living child without assistance. See Case CCCXCVI. (Dr. H. A. Hartt, *New York Journ. Med.*, Nov. 1850, p. 330.)

Case CCCXXXIV. Æt. 29 years; medium stature, strumous habit, good health, third child. Labour set in at 1 A. M.; it went on favourably; between 6 and 7 P. M. head began to press on perineum. On the passing of a pain not unusually severe, she exclaimed she had a "queer cramp" in the belly, different from anything before, and that she must rise up. She walked across the room three or four times, scarcely lamenting. On touching her pulse, found it 120. She lay down, but was restless; the head had receded; was surprised at the few symptoms of rupture. She said, that as the last pain passed off, the child gave three kicks, followed by the cramp; there was no hemorrhage, anxiety, or prostration. She remained sitting in a rocking-chair for twelve hours, without any marked decline. At 9 A. M. next day the child was turned, and delivered with ease to the head; this could not be delivered even by forceps. Child was then detruncated, and a hook passed into the foramen magnum without success; eventually delivered after perforation and removal of bones of the head. The omentum and intestines were distinctly felt, but there was *no hemorrhage* or *clots;* has been much prostrated, and not expected to live an hour. On eighth day put upon calomel and Dover's powder, blisters and tonics. The rent was at the juncture

of the neck and body. In four weeks from the accident she was in the street, and in nine weeks menstruated. (Dr. W. H. Maxwell, *N. Y. Journ. Med.*, May, 1851, p. 328.)

Dr. Maxwell has kindly favoured us with the subsequent history of this patient, which will be found in Case CCCXCVI.

Case CCCXXXV. Æt. 32; robust; third labour. Labour began December 30, at 3 P. M.; foot presentation; pains slow at first, became strong and frequent toward 9 P. M. About 11 P. M. a pain of great violence came on; a free flow of blood; labour ceased immediately, and foot no longer to be felt. She remained that night, and the following day and night, with acute pain in the abdomen. "Late in the evening of January 1 (about forty-eight hours from rupture), *gastrotomy* was performed. The child could be felt high in abdomen; a rent could be felt on a level with the brim of the pelvis, remaining open for a quarter of its length in the left side, and elsewhere obstructed by clots, &c." Child dead; but little fever followed; nothing remarkable occurred; she resumed her work in forty days. (M. Mazier, *Journ. de Méd. et Chirurg. Pratique*, quoted in *Edin. Month. Journ. Med. Sci.*, Feb. 1854.)

Case CCCXXXVI. An oblique, contracted pelvis; had borne two dead children; head became impacted at the brim. The pains, which were very strong, suddenly ceased; pulse sunk very low; a rupture felt at posterior part of the uterus; *gastrotomy;* child dead, with a greatly enlarged head. Recovered completely in five weeks. (J. F. Halder, *Nederland Weekbl.*, Aug. 1853, in *Edin. Month. Med. Journ.*, Feb. 1854.)

Case CCCXXXVII. Sixth labour; learned she had been in labour twenty-four hours; pains had been regular, but not severe; the membranes had ruptured a few hours before his arrival; head had pressed on perineum, and just on eve of expected delivery she felt something give way; the child's head had receded beyond reach, and pains had ceased. He found her with intense suffering; pulse rapid and feeble; respiration difficult; no pains; a large rent in front of uterus; the *head* remaining in the uterus; passed in his hand, and turned without difficulty; child dead; a large dose of laudanum. (Dr. Thos. Christie, in *Canada Med. Journ.*, 1853; in *Assoc. Med. Journ.*, Nov. 1853, p. 969.)

Case CCCXXXVIII. July 6, 1851, was sent for by midwife about 5 P. M., who had been with the patient since 11 o'clock A. M. The pains were then strong; os uteri quite dilated; the head did not descend, but rested on the brim of the pelvis. Saw her again at 8½ o'clock; found the head in the same position, the expulsive pains having ceased completely, although she complained of great cramps in the abdomen. I prescribed tinct. opii gtt. l. and left her for an hour and a half. On my return was informed that the laudanum had been rejected; she complained of excessive pain in the abdomen. On examining, the head of the child had disappeared, and could not be reached by the fingers. On examining the abdomen externally, the child appeared high up, close to the diaphragm. From these facts I inferred, that when the expulsive pains suddenly ceased, a rupture of the uterus had taken place. I therefore introduced the hand, and having secured the feet, extracted the child. It gave no signs of life; the placenta was extracted without difficulty. She was extremely ill for several days; pulse small and rapid; constant vomiting; abdomen distended, and very painful; a very fetid discharge from the uterus, and considerable irritation of the bowels. I gave up all hope of saving her, but she finally was restored to health. (Dr. F. Chatard, Baltimore; *communicated through Prof. R. H. Thomas.*)

Case CCCXXXIX. The wife of W. C., a milkman, 4th mo. 27th, 1852, with her second child. She had been delivered by forceps several years before, and had suffered severely from vaginal inflammation. Dr. W. had been in attendance two days. The labour had been regular and natural until the os uteri was dilated, and the head descended into the pelvis. It was then discovered that the further advance was prevented by two firm bands, almost semi-cartilaginous, nearly closing the outlet of the pelvis. The pains being strong and foreing, the doctor hoped the bands, thick as they were, would gradually soften and yield. In the course of the night the pains left her; he could not learn whether very suddenly or not. At 6 o'clock this morning, Dr. K. being called, they agreed to send for me. I found her at 7 A. M. with feeble pulse, little or no labour pains, tender abdomen; head down against the two thick semi-membranous bands. As agreed upon, I passed a sharp-pointed bistoury through the bands on each side of the vagina, dividing them freely from without inward. There was not much blood lost. Without delay I put on the forceps, and delivered her easily of a dead child. The placenta came down in a few minutes, and being withdrawn, rather more hemorrhage followed than was thought compatible with her safety. I passed my hand into the vagina, and at once encountered a knuckle of intestine, the descent of which was being promoted by a sense of bearing down. Taking the bowel between my fingers and thumb, I carried it through a rent which was found readily between the vagina and uterus. Upon attempting to withdraw the support of my fingers, the bowel again came through; I therefore prevented it by the fore and middle fingers within, while by gentle friction without I induced the uterus to contract so much as to close the rent. I withdrew first one finger and then the other, and the bowel did not follow. A large opiate, with calomel, was given. She said she was much relieved, and though we thought it right to tell her husband how desperate was her condition, and he did not conceal it from her, she boldly said, "I shall certainly recover." For two days, no very serious symptoms occurred; on the third day, a chill, followed by high fever, tumid and tense abdomen, tenderness and pain, obstinate constipation—in a word, severe peritonitis. Without detailing the treatment, which was much as usual in such cases, it will be sufficient to say that she quite recovered in a few weeks, and has continued well. (*Communicated by Dr. Richard H. Thomas, Professor of Obstetrics, University of Maryland.*)

Case CCCXL. Fourth child; had been in labour twelve hours, but for four hours pains had ceased; shoulder presented; turning effected with slight difficulty and delay; child dead. On introducing the hand on account of hemorrhage, "a transverse rent in the walls of the uterus, about three inches above the cervix anteriorly," was discovered, through which three fingers could be passed. Sero-sanguineous and purulent discharges continued for several weeks, with irritative fever and diarrhœa. Recovered, and has good health. (W. W. Duvall, M. D., *Amer. Journ. Med. Sci.*, Oct. 1855, p. 542.)

*Deaths from Rupture at full term.*

Case CCCXLI. Æt. 35; seventh child; had been in hard labour ten hours; os equalled a half-crown piece; hydrocephalic fœtus diagnosed; pains violent; was about to perforate, when, on being allowed to stand up, she had a singular sensation, with pain below the heart, with fainting and vomiting, and pains ceased; head receded; great prostration; child found among the intestines; feet brought down. She died before delivery of the head, twenty

minutes after getting out of bed. Rent from side to side of womb. (W. H. Borham, *Lond. Lancet*, 1848, vol. ii. p. 551.)

Case CCCXLII. Æt. 32; stout, sixth labour; had pain in right side since last confinement, and not generally so well as before; drinks hard; had acute pain in right side and back four days before labour came on. Pains began at 3 A. M.; at 6½ A. M. os larger than a shilling; soon membranes ruptured, but in half an hour the head had receded beyond reach; she had felt a sudden cramp, or something snap, with a tearing, and distinctly heard it; had frequent returns of the cramp, with an effort to strain; pains subsided *gradually*, and ceased at 8½ A. M. Slept quietly; got up through the day two or three times. At 5 P. M. severe pains after oil; no complaint of debility; voice firm; slight sanguineous discharge; venesection, &c.; turning, apparently at night; delivery difficult; head partly through the rent. Death in thirty-six hours from rupture. (Dr. Reid, *Lond. Med. Gaz.*, 1845, Part I., p. 685.)

Case CCCXLIII. Æt. 28; fourth child; narrow pelvis; had been in labour twenty-four hours, and turning unsuccessfully attempted; found in a state of collapse, without pain. The breech could be felt in the peritoneal cavity; the head presented *per vaginam;* head opened. The rent had been felt in passing in the hand. Died on fourth day. (Dr. Smallwood, St. Martin, Canada, in *Brit. Amer. Journ.*, 1848, quoted in *Prov. Med. Journ.*, 1848, p. 138.)

Case CCCXLIV. Sixth child, all preternatural; distorted pelvis; shoulder presentation; arm had been amputated after ineffectual attempts to turn; womb ruptured; I brought down the feet. Rent in back part of body of the womb, obliquely up toward right broad ligament. Died on fourth day. (F. Ramshotham's Reports, *Lond. Med. Gaz.*, 1843, iv. p. 463.)

Case CCCXLV. Twelfth child; foot presentation; uterus did not act violently, and no force used in extraction. Child dead; lived three hours after delivery. (*Ibid.*, p. 486.)

Case CCCXLVI. Had a family; head; died some time before help arrived; child and placenta in peritoneal cavity. (*Ibid.*, p. 519.)

Case CCCXLVII. In expulsion of a blighted ovum suffered transverse rupture at the cervix, above the os. Believed herself near full time, and had hemorrhage for two weeks previous. A surgeon removed the ovum from the vagina, and detected the rent. The uterus had not exerted itself greatly. The rent almost across the womb, and did not involve the peritoneum. (*Ibid.*)

Case CCCXLVIII. Contracted pelvis; fourth child; membranes had been broken forty hours, but no strong pains. Symptoms of exhaustion occurred rather suddenly, and found her cold, with extreme depression. Laceration felt in anterior part of cervix; feet presented, and child was extracted after perforating the head; placenta and body among the intestines. Head had originally presented. Dr. Ramshotham has known this evolution in another instance; time of rupture unknown.

*Post mortem.*—Rent transverse; six inches in length; walls of uterus around it easily tore, and the whole organ much softened; evidence of inflammation in abdomen of some standing. (*Ibid.*, p. 330.)

Case CCCXLIX. Tenth child; labours always lingering; pelvis distorted at the brim; head presented; rupture eight hours after membranes broke; pains not strong; no tearing sensation at the rent; child and placenta in the abdominal cavity; delivered by the feet; rent horizontal in anterior part of cervix; child dead; she died in twenty-four hours. (*Ibid.*, p. 369.)

Case CCCL. Eighth child; head presentation; died in forty minutes after delivery. (*Ibid.*)

Case CCCLI. Pendulous abdomen; head rested on pubis out of midwife's reach; was delivered after use of ergot; at the end of forty-eight hours, feverish, with vomiting, swelling, &c.; "the black vomiting, soft but tumefied abdomen, the absence of pulse, and the coldness of the body, led me instantly to hazard the opinion, that the symptoms were the result of laceration." She died almost immediately. An opening in the vagina behind, communicating with one in the uterus, probably made by a finger. (Dr. Ingleby, *Obstetric Medicine*, p. 206.)

Case CCCLII. Had several very difficult labours. Before twelve hours the os was fully dilated, and a consultation held previous to perforation; the head receded, laceration having taken place. Turned. Died.

*Post mortem.*—Cervix and vagina lacerated extensively just opposite the promontory of the sacrum. Brim measured three inches. (*Ibid.*, p. 207.)

Case CCCLIII. Third labour; strong pains; soon after rupture of membranes, they grew weaker. Arm presentation; turning under very feeble pains. A laceration detected in a few hours. Died about twelve hours after rupture.

*Post mortem.*—Rent from cervix upward, for five inches; uterus thin and weak at rupture, but thick and strong elsewhere. (*Ibid.*, p. 208.)

Case CCCLIV. Third child. Turning, effected with much difficulty, several hours after unsuccessful attempts at delivery. Rent of cervix into the vagina detected, and the peritoneum found extensively detached. (*Ibid.*, p. 209.)

Case CCCLV. Eighth child. Labour began at 1 A. M.; 10 A. M. of next day, very much exhausted with vomiting, &c. Head had been impacted the day before; now free; perforated, but could not be extracted. Died in a few minutes.

*Post mortem.*—Rent anteriorly, for two-thirds the length of the womb. The edges were not thinner than the surrounding parts; the contents of the womb in the abdomen; contracted pelvis. (*Ibid.*, p. 215.)

Case CCCLVI. Fifth child. Six weeks before labour, she fell down stairs, and got a violent blow upon the left side of the belly, and she exclaimed that *something had given way and broke within her.* From that time, had acute pains in hypogastrium. On the eighth day of labour, the os was somewhat dilated, the membrana broken, the pains weak and few. After being "nearly a week in labour," she was delivered by turning—fœtus long dead. Died on third day.

*Post mortem.*—Uterus ruptured, within an inch of its internal orifice, to extent of nearly four inches. (*Perfect's Cases*, vol. ii., Case 78.)

Case CCCLVII. Æt. 27 years; good health; second child. At the end of twenty hours, the pains having been very severe, even when under the influence of ether, there was cessation of the pains, and vomiting of greenish fluid, and a knee projecting directly under the integuments, near the fundus. Pulse small, and not to be counted. Perforation. The *head* did *not recede.* Delivery very difficult. Died on fifth day.

*Post mortem.*—Rent across the anterior wall of the cervix, just below the os internum. (Dr. Cabot, *Amer. Journ. Med. Sciences*, July, 1851, p. 70.)

Case CCCLVIII. Æt. 40 years. Had repeated hemorrhages of late. Premonitory symptoms of labour during the day; waiting for real labour, when she had a single, most violent pain, which felt as if something had given way within her; great prostration ensued; the os was slightly dilated;

the placenta presented. The head and arm could be distinctly felt, as if projecting through. No part of the child could be felt per vaginam. The rent was in the uterus. Died in ten hours from rupture, undelivered. (Dr. Wm. Rankin, *Amer. Journ. Med. Sciences*, Oct. 1853.)

Case CCCLIX. Sixth child. Suddenly felt a violent pain, and immediately the waters escaped with a great quantity of blood, from a rent in the inferior and right side of the womb, by which the body escaped into the peritoneal cavity while the head descended into the pelvis. The edges of the rent were firmly contracted about the neck. She died undelivered, in twenty-four hours. (Leclerc, *Ancien. Journ. de Méd.*, t. xxv. p. 522, from *Duparque*, p. 125.)

Case CCCLX. Æt. 40. Sixth pregnancy; all her previous labours severe. Died after three days of suffering; the fundus was rent; the fœtus, which was very large, had passed into the abdomen, with prodigious hemorrhage. (*Obs. Var. de Méd.*, ii., *Obs.* xxx, from *Duparque*, p. 128.)

Case CCCLXI. Æt. 27 years; third labour; died after a severe labour of forty-eight hours, having presentation of the placenta; rent of uterus and vagina; child entirely in abdomen; womb at the rupture very thin, and torn into strips, much distended; the rest of the womb contracted and entire. (Nauche, *Des Malad. de l' Uterus*, p. 216, from *Duparque*, p. 129.)

Case CCCLXII. Arm in the vagina. On introducing the hand for turning, a rent was felt, two inches in length; but, as no part of the fœtus was engaged in it, turning was completed. Died on the fiftieth day, when an opening, at the left cornu, communicating with an abscess. (B. M. Planchon. See *Duparque*, p. 132.)

Case CCCLXIII. A tearing felt during labour, and the pains instantly ceased. A living child was delivered by the "usual means." A large rent in the side of the womb, which was apparently in a scirrhous state. Died in a few hours. (Mad. Lachapelle. See *Duparque*, p. 137.)

Case CCCLXIV. Contracted brim; pains severe; *head* advanced. There was excessive sensibility of the abdomen. In about twelve hours there was suspension of pains, and while she was carried on a bed, she complained of a tearing and extreme oppression; the head could not be felt; the placenta was expelled, and the *feet* felt in the womb, by which it was extracted. Hernia of omentum. Died in six hours.

*Post mortem.*—Oblique rent; downward and forward; the edges of the rent in a scirrhous state. (Mad. Boivin, *Obs. No.* 111. See *Duparque*, p. 137.)

Case CCCLXV. Dr. Just. Frid. Ling, cited by Sue, speaks of a womb of which the fundus was extremely thick, while the right side was very thin and pierced by the feet. (*Duparque*, p. 143.)

Case CCCLXVI. A case by Camper, in which the womb was so thin as to be pierced by the feet of the child. (*Duparque*, p. 143.)

Case CCCLXVII. Æt. 40 years; ninth labour; at full term, fell from a ladder; felt no more motion; labour-pains eight days after. Os dilated, fœtus unfavourably placed. Next day, immediately after a very strong pain, seconded by violent efforts, an arm came down, and, at the same time, a noise as of a body bursting, was heard. On the third day of labour, the child could not be felt. She died next day. A very long rent was found in the right side, from which the head and one arm had escaped." The uterus could not have been healthy. (*Duparque*, p. 153.)

Case CCCLXVIII. A rupture at the fundus was recognized; the child born; no bad symptoms followed, and she nursed the child. Enlargement

of the abdomen ensued, and in a few weeks she died. A rent was found in the fundus. (Chambon. See *Duparque*, p. 163.)

Case CCCLXIX. In carrying the hand into the womb, to detach the placenta, a rent was felt, and a large hernia through it. The intestines were returned, womb contracted, and she lived a month. (From *Duparque*, p. 168.)

Case CCCLXX. Æt. 28 years; strong; had natural delivery two years ago. After three days' labour, repeated attempts with forceps. Turning attempted, causing frightful suffering; and, after two and a half hours' trial, she was abandoned, and sent to the hospital. Pains had ceased; uterus could be felt in front of the fœtus; head at the superior strait; the cervix contracted around the child's neck. On attempting to seize the feet, the entire child passed into the abdomen. She was abandoned. She retained her consciousness, and awaited the fatal moment.

*Post mortem.* A longitudinal rent, starting at the vagina, inclining to the right side. Its edges were thick, and deeply ecchymosed. (Mad. Lachapelle, t. iii. p. 159. See *Duparque*, p. 180.)

Case CCCLXXI. Had rupture of the membranes at 5 A. M.; at noon she ceased to feel the child move. For five hours repeated fruitless attempts were made, by three practitioners, to apply the forceps, and to turn, and she was sent to the hospital. Delivered by perforation, after failure to apply forceps. Died twenty-four hours after delivery.

*Post mortem.*—A longitudinal rent, from cervix upward; the edges ecchymosed. (*Ditto.*)

Case CCCLXXII. Mad. Lachapelle relates a case of a woman who died, undelivered, from hemorrhage. It proceeded from a vein beneath the peritoneum which had been only slightly broken. The region of the rupture was remarkably thin, the rest of the womb thick. (*Duparque*, p. 185.)

Case CCCLXXIII. Æt. 25 years. Lost blood, with the premonitions of labour. At the end of three days, was confined, in great pain, and died that day; uterus torn in its left side, with laceration of uterine arteries and veins, from which there had been great hemorrhage. (*Mém. de l'Acad. de Chir. Rech. sur l' Oper. César.*, P. M. Simon. See *Duparque*, p. 185.)

Case CCCLXXIV. Good constitution; third pregnancy; head; after two days' labour, version, with much difficulty. In the neck, to the left and behind, was a deep fissure, *which did not involve the peritoneum.* Died, after a few weeks, having phthisis. (Mad. Lachapelle. See *Duparque*, p. 185.)

Case CCCLXXV. Obliquity of the os; pains directed against the pubes. Death at the end of twenty-four hours.

*Post mortem.*—The placenta and almost the whole fœtus in the abdomen, with only part of the head in the uterus. The body of the womb was very thick, but around the rent it was scarce two lines in thickness. (Muller, in *Collect. des Théses de Haller*, from *Duparque*, p. 202.

Case CCCLXXVI. Breech presentation. When in labour twelve hours, the os not being completely dilated, the anterior part of the neck separated from one side to the other, and the child passed immediately into the abdomen. It was withdrawn with much difficulty, in less than two hours. She died five hours after delivery.

*Post mortem.*—The pelvis was a little narrow; the point of the os sacrum passed through the posterior part of the womb. The inner and prominent edge of the pubis and ilia resembled an ivory paper-knife. (See *Duparque*, p. 206.)

Case CCCLXXVII. Æt. 26; delicate; third pregnancy; hydrocephalic

fœtus; rupture within twenty-four hours after commencement of labour. Hernia through the rent. Rent transverse, near the union of the vagina and uterus. Delivered by forceps; died almost immediately. (*Duparque*, p. 219.)

Case CCCLXXVIII. Death after five hours of labour, with oppression, nausea, &c. The body of the child and the placenta were in the abdomen, while the head was still in the pelvis. Rent in posterior part, at junction with vagina. (Thibaut, *de l'Acad. de Rouen*, from *Duparque*, p. 222.)

Case CCCLXXIX. Æt. 28 years; third pregnancy; labour had not made sensible progress for twenty-four hours, when bloody mucous discharges took place; inexpressible uneasiness, and coldness of limbs. Twelve hours after this, she had a violent pain, followed, at once, by general sinking and cessation of pains. Rupture detected twelve hours after, but she was left undelivered for more than twelve hours, and died before it could be accomplished by forceps.

*Post mortem.*—Rent in inferior, posterior, and lateral parts of the womb, involving the vagina to a great extent; child hydrocephalic. (M. Haime, *Journ. Gén. de Méd.* See *Duparque*, p. 227.)

Case CCCLXXX. Delicate; had three severe labours. After several hours of moderate labour, the os not being fully dilated, suddenly, without having had any severe pain, was seized with vomiting, &c. The presenting parts (the foot and head) had disappeared, and the uterus was empty. M.M. Devreux, Gardien, and Roux being called in, found rupture of cervix at its union with the vagina. Turning was agreed upon in preference to gastrotomy, and done with little effort. Child dead. She died two days after. (*Duparque*, p. 265.)

Dr. Brainard, of Chicago, writes: "I have met with two cases of ruptured uterus. In one of these,[1] Case CCCLXXXI, there was a firm cicatrix across the vagina. The womb was torn transversely in front above the attachment of the vagina. After three days' labour the woman died, and being then called in to examine the body, I found the child in the abdomen. I have also ascertained, pretty certainly, that the cicatrix was produced by attempts to procure abortion.

"The other case, Case CCCLXXXII, occurred in a young woman, with, I think, her third child. She had very tedious and severe labours, and after several hours' pains, the head was well down in the pelvis. * * I found all the fœtus, but one foot, escaped from the uterus; by that I delivered. She lived four days, when she died, apparently from strangulation of the intestines."

Case CCCLXXXIII. Æt. 28 to 30 years. In the first labours the woman was delivered by taking the child from her by craniotomy. In the second labour, I was called in consultation on the third day of labour, and delivered the child, dead, of medium size, from above the superior strait, with the long forceps. I advised, in case of a third pregnancy, premature delivery. My advice was not adopted by her; and the two physicians who attended her in the third labour permitted the natural violent throes to continue three days without assistance, or even attempting to deliver her. The womb ruptured; the child passed into the cavity of the abdomen; mother and child were both lost.

The *post mortem*, which I witnessed, demonstrated what I had rendered evident with the long forceps in her previous labours, that there was capacity enough in the pelvis, but in consequence of excessive curvature of the lower

[1] See this Journal for 1848, vol. ii. p. 113, Case LXIV.

part of the spine, prominence of the sacro-lumbar junction, and non-conformity of the axis of the pelvis with the axis of the womb, the child's head could not be directed in and forced through the pelvis by the natural efforts. The expulsive action being directed toward and upon the pubis, ruptured the womb at that point. (*Communicated by Dr. Lewis Shanks, Memphis, Tenn.*)

Case CCCLXXXIV. Æt. 38 years; fourth labour. When called at 5 P. M. all pains had ceased an hour and a half before. Up to that time, pains regular and vigorous from the commencement of labour on the preceding night; abdomen a little tender; pulse 85, warm; os very high, dilatable; felt what was thought to be the head; suspected rupture; there was *no tendency* to collapse, or any marked symptom of so formidable an injury; child could not be felt under the integuments. By consent was left till 8 P. M.; head no longer felt; condition the same; pulse 92; had not had a single pain since 2 P. M. She refused to be delivered; some slight pains in about an hour. At 10 A. M. next day, she was dead. The abdomen at once opened; child and placenta among intestines; extensive rent of cervix. (Dex. Bean, Esq., Halifax, in *Lond. Lancet*, 1853, vol. i. p. 30 )

Case CCCLXXXV. Fifth pregnancy; delivered after about five hours' labour; no hemorrhage; child long dead; was left well and cheerful. Two hours after this he found her *in articulo mortis*. She had, in the meantime, been very angry, and just after this excitement, collapse ensued.

*Post mortem.*—She had had uterine disease for years; uterus uncontracted; dark, extravasated appearance on the right side, at the right lateral ligament. Two pounds of blood had escaped; nothing unusual on the inner surface; cervix rugged and ulcerated. (J. Berncastle, M. D., *Lond. Lancet*, vol. ii., 1851.)

Case CCCLXXXVI. Wretchedly destitute; had a stillborn child after a most protracted and severe labour; considerable hemorrhage, but no alarming symptoms followed till the tenth day, when profuse bleeding came on and recurred, and she sank in five days.

*Post mortem.*—Rupture in anterior and superior portions of uterus near the cervix; also an abscess at upper part of vagina. (G. J. Squibb, "*The Institute*," Lond., Dec., 1850.)

Case CCCLXXXVII. Was seen by a student at 3 P. M. In the evening, the right foot and hand brought down by a physician. Efforts at delivery ceased at about 11 P. M.; after this she had no pains, but began to vomit, and sank rapidly. At 11 A. M. Dr. C. was called in, and finding the leg protruding through the vulva, discovered a laceration of the womb. We "proceeded to turn," and delivered her of a dead child in half an hour, without much inconvenience to the patient, who felt relieved. Died in twenty-four hours, or thirty-six hours after the rupture. Hernia followed; placenta had passed into the abdomen.

*Post mortem.*—Rent three inches up the cervix, and the same distance down into the vagina. (*Reported by Dr. Conant to N. Y. Patholog. Soc.* See *N. Jersey Med. Rep.*, May, 1855.)

Case CCCLXXXVIII. Delivered previously by craniotomy; narrow pelvis. Was called in consultation at 11 A. M. on the 4th. She was taken in labour on the 1st; pains slight till evening of the 3d, when Dr. G. was sent for. Pains had been strong all night, but suddenly almost entirely ceased about 6 A. M.; abdomen tender, not tumefied; constant grumous discharge; head felt presenting very high up. Brought down a foot, and delivered her in a few minutes of a semi-putrid child. Shoulders and head delivered with some difficulty; the flattened head indicated great pressure; placenta came,

and womb contracted well; prostration followed; soon fell asleep; bid fair to convalesce till she expired suddenly at 6 A. M. next day.

*Post mortem.*—Slight peritonitis; a rent in anterior surface, almost severing the cervix from the body. Diameters of superior strait $2\frac{7}{8}$ in. and $4\frac{1}{8}$ in. (Dr. A. K. Garduer, in *Amer. Med. Monthly*, 1854, vol. ii.)

Case CCCLXXXIX. Robust; ninth labour. Fouud child delivered, and mother prostrated from profuse hemorrhage. Labour had been rapid, but, as the head passed the vulva, there was a copious dash of blood, which still flowed; placenta not yet come away. In seareh of this the hand suddenly slipped through a jagged strictured orifice, and touched the intestines. She soon expired. For two or three months, though iu apparently good health, she believed she would not survive this labour. "Could there have existed a softened or diseased spot—say of ulcerative inflammation in the fundus—which, during gestatiou, without giving rise to much general disturbance, could yet, through nervous depression, aecount for the womau's prescience, and which caused so weakened a state of the parietes as to cause them to give way during labour?" (Dr. H. R. Worthington, in *Amer. Journ. Med. Sci.*, Oct. 1854.)

Case CCCXC. Æt. 40 years. Called at 10 P. M. She had for two or three months been subject to uterine hemorrhage, and for two weeks almost constantly. Had premonitory symptoms in the morning, and during the day, but no real labour until a short time before the visit, when she had a single most violent pain, and felt something give way. Great prostration, followed with tendency to vomit; great tenderness of abdomen, and coldness of whole body; pulse was impereeptible; constant sighing and restlessness; os was slightly dilated; presentation could not be felt. The head and arm could be distinctly felt through the parietes of the abdomen, as if projecting through a rent in the uterus. Fearing to deliver in her depressed condition, she was left to her fate, and died at 8 A. M. (Dr. Rankin, *Amer. Journ. Med. Sci.*, Oct. 1853, p. 393.)

Case CCCXCI. Healthy; æt. 40; second gestation; labour pains came on in afternoon of 9th inst., when they became quite strong, and continued so till midnight, when she had one unusually severe, followed by a chill, and then ceased; 3 A. M. physician sent for, who found her cold and nearly pulseless; at 9. A. M. she was moribund; the child's head had remained down nearly to the external organ, but was not immovable.

*Post mortem.*—Breech protruded four iuches from the rupture; uterus contracted; placenta loose in abdomen; rent extended from the os laterally to within an inch of the fundus. Thickness of walls at the rent was half an ineh; at the opposite side one inch and a quarter. (Dr. Putuam; see *Amer. Journ. Med. Sci.*, July, 1855, p. 50.)

Case CCCXCII. Multipara; after a labour of twelve hours, had sudden excruciating paiu, followed by distress at scrobiculus cordis, with vomiting, and rapid, feeble pulse. Delivered by forceps; placenta easily removed. Died in forty hours from rupture. There was in this no retrocession of head, nor external hemorrhage. (*Ibid.*)

Case CCCXCIII. Fourth child; afternoon, found os pretty well dilated; head could be reached only by an effort, by which membranes were ruptured; pains regular, aud tolerably vigorous till midnight, when, as head was little inclined to descend, gave from half a drachm to a drachm of ergot in three doses. The pains beeame powerful, then less severe, then ceased; head receded, and body passed out of the uterus, and could be felt there. The delivery of the head required the crotchet, as the head was large and firm.

Died on third day. (*Transact. New Jersey Med. Soc.;* see *Dr. Storer's Rep. to Amer. Med. Assoc.*)

Case CCCXCIV. After labour had lasted several hours, pains almost entirely ceased; forceps failed; pains subsided; patient died in twelve to thirteen hours after first seen.

*Post mortem.*—A rent four inches long in anterior part of fundus; the most of the child had escaped; the head unusually large. (Dr. J. M. Pugh, in *Philad. Lancet,* vol. i. See *Dr. Storer's Report to Amer. Med. Assoc.*)

Case CCCXCV. Under care of midwife. Twenty-six hours after labour began she suddenly exclaimed that something *had given way internally.* Pains at once subsided; soon after a physician sent for, who remained all night, and *bled* her for *rigidity of the os uteri.* Dr. H. was called in the morning. The head had receded from the perineum beyond reach, and the child had escaped from the womb. She was sinking rapidly, and was left undelivered.

*Post mortem.*—A rent several inches in length through the cervix. (*Reported by Dr. H. A. Hartt, N. Y. Journ. Med.,* Nov. 1850, p. 330.)

Case CCCXCVI. The same patient as in Case CCCXXXIV of recoveries. About three and a half years after first rupture Dr. H. was sent for, and reached her in the fourth day of her labour; was very weak; pulse 118, and feeble; respiration hurried. The hand had presented with severe pains, and twenty-four hours after they began, a snap was distinctly heard by her friends around her, the hand receded, and from that moment labour had been suspended. Found a large opening in the seat of the former rupture, and felt the child in the peritoneal cavity. Dr. H. turned and delivered, with great gentleness. She gradually sunk, and died thirty-six hours after delivery. (*Ibid.*)

Case CCCXCVII. Æt. 35 years, seventh child. Labour progressed favourably for four or five hours, when the pains suddenly ceased. She complained of chilliness and of great pain in the left iliac region; great prostration ensued. Death twenty-four hours after labour pains ceased. The head was low down, and an attempt to apply forceps was made just before her death; the head did not recede after the rupture.

*Post mortem.*—Fœtus in peritoneal cavity; head firmly impacted in the inferior strait, and "it required no small amount of force to dislodge it;" placenta also had escaped. The rent was through the left portion of the neck, near its union with the vagina; edges irregular, and softened "from inflammation following the accident;" extensive marks of peritonitis. (Dr. S. S. Purple, *N. Y. Journ. Med.,* Nov. 1852, p. 338.)

Case CCCXCVIII. Fifth child; called in consultation at 3 A. M.; taken in labour near 6 P. M. the preceding evening; labour went on well till one hour ago; membranes ruptured at midnight; head advanced steadily till 2 A. M., when she got a sudden cramp, and said something had given way within her. Expulsive pains ceased; cramps continued; pulse feeble, irregular; respiration hurried; sense of suffocation; jactitation; green vomiting came on, and collapse, followed by death, a few moments before he reached her. The head was low down the vagina, and had not receded.

*Post mortem.*—Fœtus in peritoneal cavity with placenta, &c.; body of womb contracted; on right side, near union with the vagina, was a large ragged rupture. "The parietes were softened, and required no great force to produce separation." (*Ibid.*)

Case CCCXCIX. Same patient as Case CCCXXXIV. "Eighteen or twenty months after previous rupture, I attended her in labour of about eight

hours. The labour progressing, and the head descending, I was at the bedside with the finger in the vagina, when suddenly there was a complete cessation of the labour; the head of the child receded. Up to this time there were no symptoms to indicate any but a favourable termination of the labour. I was watchful for the opportunity to aid my patient in her delivery by the use of the forceps. Before, however, the child, which was dead, could be removed from the mother, the latter expired. No post mortem could be obtained." (*Communicated by Dr. W. H. Maxwell, New York.*)

Case CCCC. Æt. 32 years; well made, pelvis well formed, and no obstruction in passage; presentation natural; head of average size; seventh labour. Labour began at 4 P. M.; until 5½ P. M. only ordinary pains, when the membranes broke after a violent pain, and about a gallon of water escaped. After this, there was no pain till 8 P. M., when she had two peculiar pains, and the head descended somewhat, according to the midwife; no pains afterward; low and anxious, with great tenderness. At 10 P. M. she gave ergot, but with little or no effect; 4 A. M. first seen by a surgeon. She was restless, exhausted, weak; rapid pulse; great pain and tenderness; forceps cautiously tried at 6 A. M., but failed to apply them; ergot given without effect. 9½ A. M. I was sent for; great and immediate danger; perforated with considerable difficulty, from its mobility. Removed the placenta, and found extensive rupture of posterior part of womb; the hemorrhage slight. Died at 10 P. M., about eleven hours from removal of child. (W. Sedgwick, *Lond. Lancet*, 1853, vol. i. p. 54.)

Case CCCCI. After long-continued pains, the os very slowly dilating, she had a peculiarly acute pain, followed by collapse; os not found more dilated than before, and a fissure extended from it; a dead child was extracted by forceps, and the mother did not survive the operation.

*Post mortem.*—A rent on left side, four inches in length; a *cyst* in *left ovary* of the size of a child's head, had prevented the descent of the head. There was no rupture of the peritoneum. (Dr. Ogier Ward, *Lond. Lancet*, 1853, vol. ii. p. 487.)

Case CCCCII. Æt. 38 years; twelfth labour. Visit at 4 A. M.; os equalled a crown piece; head presented; membranes ruptured; roomy pelvis; pains slack, but much complained of, and occasional vomiting. Up to 7 A. M. labour progressed very slowly; the first stage completed, and as pains did not improve, gave ergot, repeated in a half hour; as little effect was produced, gave no more. The pains were not like labour pains, but much harder to bear, and confined to lower part of abdomen. About 8½ A. M. found head well down toward the perineum; pains moderate; but she now became violently excited; cried out that the "pain was dreadful, of an intense burning character, which never left her, and which she could not live under." She persisted in getting out of bed, when she became suddenly pale and quite calm. Instantly suspected rupture; placed her on the bed; the head had receded; was almost pulseless; gave stimulants, and sent for forceps. It was now 10 A. M.; fell asleep, awaking occasionally. All pain had left her. About 12 she asked, "What was that crack?" Immediately applied forceps; she complained again of the burning pain, and became very violent. In about half an hour, after much labour, just as I delivered the head, she expired. The shoulders defied all efforts to extricate them.

*Post mortem.* Breech and legs of child, with placenta, in peritoneal cavity; contracted womb low down in left iliac region, hid from sight; the rent extensive in the anterior wall; child occupied entire pelvis, and could not be moved; probably a quart of coagula. As far as I could ascertain, there was

no thinning of the uterus, or disease of the walls. (James Barron, *Lond. Lancet*, 1853, vol. ii. p. 587.)

Case CCCCIII. Æt. 32 years; always healthy; ninth child; all had presented unnaturally; pelvis roomy. Called at noon; had been in labour twenty-seven hours, and waters escaped for twenty-five hours; her whole appearance choleraic; pulse small and quick; great thirst; vomited coffee-ground coloured matter; had pains about once in fifteen minutes, crying out loudly at the accession of each; os equalled a crown piece; presentation of something soft, could not be made out; excessive tenderness of bowels; uterus felt contracted to size at three months. The collapse was constantly increasing, and she was not delivered. She died at 6 P. M.

*Post mortem.*—Child weighed twelve to thirteen pounds; in the peritoneal cavity; placenta in the vagina; coagula in abdomen; the rent obliquely forward from near the broad ligament down to the os; the vagina not torn; at the upper part the walls were two inches thick, at the mouth six-eighths of an inch.

She had been seen by a quack seven hours after labour began, who introduced his hand, and during his manipulations she felt a sudden great pain, exclaiming something had burst, and that she was killed. Soon after this, vomiting commenced, and she continued to grow worse. (Chas. Vaudin, *Lond. Lancet*, 1854, vol. ii. p. 273.)

Case CCCCIV. Thirty-five years, strong and healthy, tenth pregnancy; had been in labour twenty-four hours, and the waters had escaped twelve hours; the os equalled a crown piece; vertex presentation; pains frequent, trifling, and ineffectual. She remained thus "without further evidence of completion of labour" for twelve hours. Turning was then performed, but, owing to some unknown difficulty, delivery could not be effected; collapse ensued; she died in twelve hours from his first visit.

*Post mortem.*—Child a female, weighing eleven pounds, which had been extruded from the uterus, excepting the feet and legs; rent in right side, close up to the os, and almost half through its circumference, the edges jagged and shreddy, the whole organ very dark, very flabby, and much softened; pelvis rather small, with a prominence of sacrum, which diminished the sacro-pubic diameter. (*Ibid.*)

Cases CCCCV, CCCCVI, CCCCVII. "I have seen three other cases of rupture of the uterus, which all terminated fatally. One under the care of Dr. R., the rupture having taken place while the patient was attended by a midwife; she lived for several days. The second occurred to the late Dr. M.; the case terminated fatally in an hour after the accident. The third I saw with the late Dr. B.; she lived two or three days." (Dr. F. Chatard, Baltimore. *Communicated.*)

Case CCCCVIII. Æt. 19 years, with her first child. She had a severe labour, and was constantly making immense efforts when her pains were present—greater than I ever knew to be made—so violent, that I repeatedly told her she would rupture her womb if she persisted. In the midst of a violent pain she shrieked out vehemently, and the pains became almost instantly less severe. She soon gave birth to a *living child*, but gradually collapsed, and in three or four hours died. The neck of the womb presented a rupture through its *muscular coat* an inch and a half to two inches in extent; the peritoneal coat was safe. (*Communicated by Prof. D. H. Storer, Boston.*)

Case CCCCIX. Æt. 40 years; had eight or ten children. Dr. T. had visited her repeatedly the day before in a slowly progressing labour; vertex presenting at the upper strait. The doctor left her at 10 P. M., directing the

friends to send for him if the pains increased in strength and frequency. At 4 A. M. he was sent for. While leaning with her pendulous abdomen upon a wooden stool, she had a violent pain, and cried out something had given way; some blood was lost from the vagina, and the pains did not return. The head of the child, which was very evidently at the upper strait at 10 P. M., had now disappeared, and the pulse very feeble. I was sent for, and found the patient, between 5 and 6 A. M., almost pulseless, countenance sunken, skin bathed in sweat, steady pain in the abdomen, and almost moribund. Child's limbs could be felt through the abdominal walls. Having prepared myself for turning, and directed the frequent administration of brandy—the woman being quite sensible and able to swallow—I introduced my left hand into the vagina, and discovering a large rent on the left and upper part of its connection with the uterus, passed my hand into the peritoneal cavity, found the feet, and brought them without difficulty into the vagina and pelvis. Some bearing-down pains (abdominal muscles) now came to my assistance, and a large dead child was without any improper delay delivered. The placenta, and perhaps a pound or two of coagula and fluid blood, followed. The uterus was found to be contracted, and the hemorrhage ceased. The pulse rallied; she expressed great relief; pain ceased; she took some laudanum, brandy, &c. In about eight hours she sank and died.

*Autopsy.*—Flaccid, pendulous abdomen; cellular tissue loaded with fat; leucophlegmatic appearance of skin; uterine walls unusually thick—softened and diseased in the right side, where a laceration, even in the semi-contracted state of the organ, measuring two and a half inches, had occurred; the vagina also forming a large part of the aperture. (*Communicated by Dr. Richard H. Thomas, Prof. of Obstetrics, University of Maryland.*)

Case CCCCX. Called to Johns, a coloured woman, 11th mo. 30, 1849, by Dr. K. She had been several days in labour, under the care of a midwife, who had repeatedly given her medicine. When Dr. K. saw her last evening, the pains had ceased suddenly, after having been very strong. She appeared much fatigued, but nothing very unusual attracted the Dr.'s notice. He directed refreshments and rest. He left her in charge of a midwife. About 4 A. M., Dr. K. was summoned. She had rested none; constant pain in the uterine region. She had been growing weaker, almost fainting; sick stomach and vomiting; if not relieved must die. Stimulants were given, and I saw her at 8 A. M. Pulse very feeble; countenance depressed and sunken; skin cool, and bathed in sweat; abdomen and uterine globe tender and painful; mind clear, anxious for relief. Shoulder presented above the superior strait, and entirely in utero; os very dilatable; diagnosed rupture of uterus, without escape of child. The midwife prevaricated, and did not acknowledge what we afterwards ascertained to be the fact, that she had given ergot freely, before the pains ceased so suddenly. While we endeavoured to sustain, by brandy and water, Dr. R. proceeded to turn; the feet were easily found, and the pelvis readily came down; but the shoulders and head were large, and much delay and difficulty took place in their disengagement. She was very much exhausted. The placenta soon followed, with little hemorrhage. She continued to sink, and died in two hours.

*Autopsy.*—Uterus contracted to nearly the usual size, twenty-four hours after delivery. A large rupture extended from the vagina, nearly half its length; part of the vagina also lacerated. (*Ditto.*)

Case CCCCXI. Æt. 32 years; had five premature confinements. Fourth mo., 1853, Dr. K. was called, at 7 P. M., on 26th. Vertex presenting,

membranes gave way at 11½ P. M. Copious discharge of waters; head slightly advanced, "pains severe and expulsive;" great restlessness. About 1 o'clock A. M., while on close-stool, patient suddenly cried out with excruciating pain in epigastrium; faintness; vomiting; total cessation of all labour pains; and frightful prostration ensued. Dr. K. at once concluded a rupture of the uterus had taken place; had her properly placed, and sent for a medical man, who, with him, wishing my assistance, I saw her at 4 A. M. She was greatly depressed; almost pulseless; extremities cold; brandy was being administered freely; the head of the child being still within reach, I was able to use the perforator, and, after evacuating the contents of the cranium, to deliver the child with the crotchet, about 5 A. M. Hemorrhage, to a considerable extent, took place during the delivery, but ceased very much upon the delivery of the placenta. A rupture, large enough to admit the hand, was detected on posterior wall of the vagina and neck of the uterus. The patient continued very prostrate until 8 o'clock A. M., when reaction came on, and the pulse returned at the wrist, and warmth to the extremities; strict quiet; anodynes. 28th. Rested well; no febrile excitement; a dose of oil. 29th. Rested well; pulse frequent; tongue brown; abdomen greatly distended; uterine region tender; was bled and leeched with relief. 30th. Better. From this time she improved until 5th mo. 9th, when she was declared to be convalescent, and the Dr. took his leave. On the 12th, Dr. K. found her suffering with throbbing pain in the right iliac region; tympanitic abdomen; small, thready pulse. May 13. Pain was relieved yesterday, followed by four or five dejections, containing blood and pus. She is now sinking. She died at 8 A. M., about twenty-four hours from the first complaint of pain in the iliac region, and eleven days after the occurrence of the rupture. "The patient clearly recovered," remarks Dr. K., "from the ruptured uterus, as she had been for some days without fever, had good appetite, &c. She succumbed at last to the pelvic abscess, which discharged into the rectum." (*Ditto.*)

Case CCCCXII. Æt. 28; admitted into Emigrant Hospital, June 22, 1853; second child; labour commenced some hours prior to admission; the head presenting in the first position; pelvis of normal size, and the os uteri well dilated. The pains were extremely severe, until the head had passed through inferior strait, when they suddenly ceased; the countenance became anxious, the lips livid, the patient complaining of dizziness only; pains soon recurred slightly, with very moderate expulsive force, and her strength began to fail; the pulse to increase in frequency; and, as the axilla could be reached with the finger, it was introduced, and delivery completed by very slight traction. Child stillborn; head large and tumefied; liquor amnii greenish; placenta in vagina; the uterus was contracted sufficiently for the bandage. The lividity of countenance remained, without any complaint of pain. Soon she became restless, with increased anxiety, and great exhaustion; there was no hemorrhage; ice and brandy were given freely, but she died without reaction in an hour after delivery.

*Autopsy, twenty-four hours after death.*—Body well nourished; muscles pale and flabby.

*Abdomen.*—Uterus firmly contracted. In the centre of the posterior portion of the neck of the uterus there was a rupture, from the os, an inch and a half in length on the internal surface, and an inch externally. The walls were flabby, of normal thickness. About two ounces of blood were found in the peritoneal cavity. The liver was large, and had a fatty appearance, as in cases of pulmonary phthisis, and quite friable; kidneys exsanguined and soft.

The lungs were healthy; the heart was flabby, with some fatty deposits on the exterior surface. There had been nothing peculiar in her condition, until the moment after her pains had ceased.

The small extent of rupture, and the fatty appearance of the liver and heart, are worthy of regard, in connection with the occurrence of death so soon after so slight a lesion. (*Communicated by Henry G. Cox, M. D., Prof. Theory and Practice Med. N. Y. Med. Coll.*, and formerly *Clin. Lecturer on Dis. of Women and Children in State Emigrant Hospital.*)

Case CCCCXIII. Was seen after about two days' labour. For thirty-six hours after the rupture of the membranes, there was little or no pain; pains then came on, and early delivery expected; but the pains ceased, vomiting came on, skin cold and clammy, pulse feeble, but the head did not recede, nor had any sharp, sudden pain been noticed. Was seen by Dr. C. seven hours afterward. A soft, fluctuating tumour, not the bladder, could be felt over the hypogastrium. The forehead was felt per vaginam; forceps slipped off the head; head perforated; found hydrocephalic. She lived four hours after delivery, and eleven after rupture.

*Post mortem.*—A half pint of blood in abdomen; the peritoneal coat supposed to be torn in removal; for, in the vicinity of the rent, the uterus was softened; some lymph upon the uterus, and some pus between bladder and pubes. On opening the uterus, which was large, dark, and somewhat softened, a rent was discovered on the right side, anteriorly and near the neck; vagina intact. (Dr. Thos. F. Cock, *N. Y. Journ. Med.*, 1855.)

Case CCCCXIV. Æt. 20 years; third pregnancy; one stillborn after severe labour; labour favourable until head had descended into the pelvis, when, about forty-one hours from the beginning of labour, the contraction ceased, but abdominal pains and vomiting were present. Forceps were applied, but head receded. When seen by Dr. C., seven hours after supposed rupture, she was livid, distressed, restless, vomiting; pulse 150; fœtus felt through the parietes, abnormally distinct. There was a perforation in the perineum, and a band in the vagina, from a former labour. The finger could reach the head above the pubes; forceps and perforation inadmissible; gastrotomy mooted; died undelivered, three hours afterward, or about ten hours after rupture.

*Post mortem.*—Fœtus entirely escaped from the uterus; a knuckle of intestine and a part of peritoneum showed marks of inflammation. A large transverse rent anteriorly, one inch above the os. The anterior vaginal wall extensively lacerated. *Pelvis.* Antero-posterior diameter at brim, four inches; transverse, four and a half inches. Inferior strait, transverse, three and a quarter inches; antero-posterior, four and a half inches. The pubic arch resembled that of the male; the *linea ileo pectinea* "quite sharp." (*Ditto.*)

Case CCCCXV. Multipara; æt. 35; sixth child; previous labour easy. Labour progressed slowly, with inefficient pains for thirteen hours; pains then ceased. There was *no outcry*, or *sensation of tearing*, and the head did not recede. In about seven hours after this, she was found with a sunken, haggard, and pale countenance; jactitation, with pain over whole abdomen; pulse feeble, and 160; the head had not receded; portions of fœtus distinctly felt on left side, but not on right; forceps tried, but bent, and head opened. She lived one and a half hours, or about eight and a half after rupture. (*Ditto.*)

Case CCCCXVI. Æt. 37; seventh labour; good health. Labour began at noon; doctor called at 7 P. M.; pains expulsive, regular, and everything favourable. At 1½ A. M., during a strong contraction, she complained of

acute pain in the back and abdomen to the umbilicus. Contractions ceased suddenly; she felt, during the pain, as if she should burst; she got upon her feet and fainted; countenance pale and sharp; surface cold and clammy; pulse rapid, wiry, and fluttering; head had not receded; vomiting of dark red fluid soon occurred; forceps applied, and child delivered stillborn, followed by two or three quarts of blood. Child weighed 12 to 13 pounds. Previous to delivery, the uterus had broken away, and occupied the right upper abdomen, and the fœtus the lower and left—the head not having receded. Death in less than two hours after rupture.

*Post mortem.*—Uterus excessively large and firm; rent of two and a half inches of cervix and vagina, posteriorly; uterine walls more than double usual thickness. Hence it is inferred the rupture occurred from immense muscular power, the fœtus being large. (*Ditto, communicated by Dr. E. W. Owen.*)

Case CCCCXVII. Æt. about 30 years; had had an instrumental labour, the second natural, the third fatal. Labour pains began in the morning. In the afternoon labour seemed near its close, but suddenly the contractions ceased, and had pain in epigastric region, with dyspnœa; forceps used with great difficulty; head drawn down with difficulty by perforator. By successive efforts of three operators, fœtus drawn down by a handkerchief around the neck. She died in an hour.

*Post mortem.*—Large clots, and some blood in abdomen; transverse rent anteriorly, at junction of uterus and vagina, three inches long, with ragged edges, and greatly ecchymosed; antero-posterior diameter of brim of pelvis 3½ inches; transverse, 5½ inches; promontory very prominent. (*Ditto; seen only after death.*)

*Causes of Rupture.*—The cases now presented afford still further confirmation of the views urged more especially by Dr. Murphy, and supported by our previous statistics, that a diseased condition of the womb is frequently met with in cases of this accident. Thus the uterus was thin and brittle in Case CCCX. It was thin in *seven*, viz: in CCCXIII, CCCLXI, CCCXV, CCCLXVI, CCCLXXII, CCCLXXV, CCCXCI. It was softened in *seven*, CCCXII, CCCXLVIII, CCCXCVII, CCCXCVIII, CCCCIV, CCCCIX, CCCCXIII. In Case CCCLIV the peritoneum was extensively detached. In Cases CCCLXIII, CCCLXIV, it was in a scirrhous condition. In Case CCCLXXXV the womb had been long diseased. In Cases CCCLXX, CCCLXXI, it was deeply ecchymosed. In Case CCCCXII the walls were flabby, and of natural thickness. In Case CCCCXVI there was great development of muscle. In Cases CCCLV, CCCCII, there was no disease. Of *twenty-two* of these in which the point is distinctly stated, in *nineteen* there was positive disease, and in *three* there was no appreciable disease. These *twenty-two*, added to the *forty-five* previously reported, we have *sixty-seven* in which the condition of the womb happens to be reported. In *thirteen* only is it reported as healthy; in *twenty* softened; in *twenty-one* thinned; in *one* both thinned and softened; in *three* both thinned and thickened; in *eight* "diseased;" in *one* thin and brittle. The larger proportion of instances in which the condition of the womb is stated, among the cases now presented, is probably due to the fact that attention has been only quite recently turned

to this point. Observations in this particular are of the highest importance in enabling us to determine the causes of this accident, and it is very desirable that attention should be especially directed to it in future examinations when the result proves fatal.

The above are, we believe without exception, cases of *spontaneous* rupture of the womb. Lacerations of the cervix and vagina may, of course, take place in consequence of rude violence in attempts at delivery, as our cases abundantly show. When there is no such morbid condition, if it can be shown, as would seem from our statistics to be very probable, that spontaneous rupture is generally associated with, and we may therefore say due to an appreciable morbid condition of the womb, the practitioner is relieved of a degree of the responsibility which is attached to him.

In a few cases, not included among those enumerated, the parts around the rupture are described as "deeply ecchymosed;" others as "flabby;" these conditions are most probably due to some decided alteration of structure, though there was no appreciable softening or loss of substance. In Case CCCCXII, Dr. Cox suggests that the "small extent of the rupture, and the fatty appearance of the liver and heart, are worthy of regard, in connection with the occurrence of death so soon after so slight a lesion;" we would still further suggest that the condition of the uterus, predisposing to rupture, might possibly be due in such a case to a fatty degeneration of the muscular fibre similar to that found in the heart. This point may be worthy of notice in future examinations of those dying from a ruptured womb. Whatever the cause may be of the softening and thinning which is found in so large a proportion of the cases of this accident in which the condition of the womb has been hitherto noted, we certainly, as yet, know little of it. Do these lesions take place during the last few months of pregnancy, or do they take place during parturition? Some light may yet be thrown upon this point by examining the uterus of puerperal females dying from other causes than this accident, to ascertain if these lesions ever exist in such. That thinning of the inferior segment of the womb may occur from long-continued pressure of the gravid uterus, we may conceive possible; but if this be a cause of rupture, it is remarkable that the accident is of such rare occurrence, since in every pregnant woman the pressure exists. Moreover, we have instances in which the thinning was of the body of the womb, and others in which it was confined to a limited portion which had become dilated before rupture. Thus, in Case CCCLXI, the right side was entire and contracted; the left side "much distended, very thin, and torn into strips." In Case CCCXIII, at the seventh month, the rent was in the fundus, and the surrounding parts were of the thickness of writing paper. Of the cases of softening, in CCCXLVIII there was evidence of inflammation of some standing. In CCCXCVIII, "the parietes were softened, and required no great force to produce separation." Rupture occurred after eight hours' labour, and death apparently within one hour after the accident. The changes in the uterine

structure, it would seem, must have been antecedent to labour, as they could scarcely have come on during labour, and certainly not after the accident occurred. On the other hand, in Case CCCCIV, in which the pains had been feeble, and she died thirty-six hours from the beginning of labour, the organ was "very dark, very flabby, and much softened," and yet she is reported as strong and healthy, and in her tenth pregnancy.

These alterations of structure doubtless take place in some instances, antecedent to labour, from causes not well understood; and in others during labour, from long continued muscular exertion

*Contractions of the pelvis* have always been prominent among the causes enumerated by authors. We have already quoted the remark of Ramsbotham, that he had never known a case in which there was not some contraction. The most obvious modes by which a contracted pelvis may lead to this accident, are the thinning of the lower segment of the womb from pressure, and the resistance presented to the progress of the child under the impelling power of the uterus. Disproportion between the head and the pelvis, from whatever cause arising, would seem to produce similar results. That there is an intimate relation between such disproportions and the occurrence of the accident, will appear from what follows.

In Cases CCCXLIII, CCCXLIV, CCCXLVIII, CCCXLIX, CCCLII, CCCLV, CCCLXXVI, CCCLXXXVIII, CCCCIV, CCCCXIV, CCCCXVII, total *eleven*, the pelvis was more or less contracted. These, added to *sixty-three*, make *seventy-four* as the total of contracted pelves in about four hundred cases of rupture. But, as the histories of many of our cases are brief and imperfect, the existence of contraction may have been omitted in some, so that it is proper to state it thus—that there were *at least* seventy-four in *four hundred and seventeen;* or 18 per hundred.

The head was impacted from disproportion in Cases CCCLVII, CCCCII; and in CCCXIV the head was unusually large. There was obliquity of the os, the pains being directed against the pubis, in Cases CCCLXXV and CCCLXXXIII. In Case CCCCI, the descent was prevented by an enlarged ovary.

In Cases CCCXXXII, CCCXLI, CCCLXXVII, CCCLXXIX, CCCCXIII, the fœtus was *hydrocephalic*. These *five*, added to *seven* previously reported, make *twelve*, so that there were *at least* that number of instances of this complication in about four hundred cases, or *three* per hundred.

*Rigidity of the os.*—In cases CCCXVIII, CCCXXVII, CCCXXXI only, did the obstinate rigidity of the os appear to be the *cause* of rupture; adding *three* previously reported, gives *six*.

*Obstructing bands in the vagina.*—In Cases CCCXXXIX, CCCLXXXI, CCCLXXXII, CCCCXIV, the resistance of these apparently caused the rupture; adding *two* previously reported, gives *six*.

We have, then, as *conditions obstructing the progress of the child*, and therefore leading to rupture:—

| | | | | | | |
|---|---|---|---|---|---|---|
| In 417 cases of this accident, | | | *at least* | 74 | cases of | contracted pelvis. |
| " | " | " | " | 12 | " | hydrocephalic fœtus. |
| " | " | " | " | 6 | " | rigidity of the os. |
| " | " | " | " | 6 | " | bands in the vagina. |
| | | | | 1 | case of | enlarged ovary. |
| | | | Total, | 99 | | |

The proportion of each of these complications, compared with the whole number of cases, must be regarded as relatively very large, especially in the instance of contracted pelvis. We see that in at least one-fourth of the whole number of cases there is a disproportion between the head and the pelvis, or an obstruction from organized adhesions of the vagina. This estimate is exclusive of cases in which the head is noted as large and firmly ossified. We cannot, therefore, err in regarding this relation as one of cause and effect. That such obstructions existed in many cases in which it is not alluded to in the histories given, is rendered probable by considering the duration of labour previous to rupture.

*Time from beginning of labour to rupture.*—Taking the whole of our cases in which this is specified, we find that rupture occurred in—

| | | | | | | |
|---|---|---|---|---|---|---|
| 6 hours and less | | | from the beginning of labour | | in | 38 cases. |
| 12 | " | and over six | " | " | " | 36 " |
| 18 | " | and over twelve | " | " | " | 10 " |
| 24 | " | and over eighteen | " | " | " | 20 " |
| 36 | " | and less | " | " | " | 16 " |
| 48 | " | and less | " | " | " | 14 " |
| Three days and less | | | " | " | " | 11 " |
| Four days and less | | | " | " | " | 2 " |

Comparing these with the *duration* of labour in the 15,850 cases reported by Dr. Collins, we find that 13,412, or eighty per cent., terminated within six hours; 1,672, or sixteen per cent., in from six to twelve hours; and that in corresponding periods of six hours beyond this, they were but from one to two per cent.

The table above embraces 34 cases of contracted pelvis, but, after deducting these, the relative periods remain but little changed. It will be seen that the duration of labour previous to rupture is very much greater on the average than the entire duration of ordinary labours, according to Dr. Collins. The obstacle to delivery presented by the disproportion between the head and the pelvis, &c., explains this fact; and the probability that such hindrances to the progress of the child existed in many of our imperfectly reported cases, in which it is not noted, is strengthened by a consideration of the protracted character of the labours as a whole. But while the protracted character of the labour, under a continued succession of unavailing efforts to drive the head of the child through the pelvis, explains the frequent coexistence of such disproportion and rupture, there are not a few instances in which the duration of the labour was so short, or the character of the labour so little

severe, that we cannot so readily trace any necessary connection between these and the relative size of the head and pelvis. In not a few instances, the first labour-pain was that causing the rupture. Thus, among contracted pelves, in Case XLII the head had passed the superior strait at which contraction existed, before rupture took place. In Case XCI, pains were feeble. In CCXVIII pains were feeble, and of but six hours' duration. In CLXIX pains feeble, and four hours. In CCCXLVIII they were not strong; in CCCXLIX, no strong pains; in CLXVI, moderate pains; in CXCVII, common labour.

*Inordinate voluntary exertion* deserves to be enumerated among the causes of rupture. It is prudent to persuade the patient to abstain from voluntary efforts, provided there be resistance to the progress of the child from any cause. We believe that no case of rupture has yet been published in which chloroform[1] was used, which may be due to the fact, that voluntary effort is for the most part suspended under its influence. In Case CCCCVIII, Dr. Storer warned his patient of her danger, but the accident occurred.

Dr. Tyler Smith, in his work on Parturition, p. 225, Amer. edit., remarks, "in ordinary labour, some amount of voluntary or instinctive action of the muscular system, and particularly of the expiratory muscles, is quite natural during the stages of propulsion and expulsion. In acute or severe labour, these voluntary exertions are productive of great mischief," as lacerations of the uterus and perineum, and exhaustion.

Then we have another class in which rupture was induced by violence, or from artificial stimulus of the womb. In Cases LXIII, CXLI, CCXCIV, CCCXCIII, CCCCX, ergot[2] was given; and in Case CCLXIII, alcoholic stimulants.

Among the cases of hydrocephalus, we have Case CCCXXXII, a labour of but two and a half hours; and Case XLVII, which lasted five hours. The remainder of these, with those in which there was rigidity of the os and bands in the vagina, were in labour, with scarce an exception, over thirty-six hours.

*Situation of the Rupture.—During pregnancy* four involved the fundus; these, added to thirteen in the fundus and body, before reported, make *seventeen* of the fundus and body, and *eight* involving, more or less, the cervix.

*During labour:* Of the entire number of cases, *one hundred and ten* are distinctly spoken of as involving the cervix; seventeen the fundus; and *seventy-one* the body of the womb. Of these seventy-one, by far the larger part are reported as ruptures of the anterior or posterior part, or of the right or left side; and in some of these, it is highly probable that the rupture involved the cervix also.

[1] This consideration, which is certainly an inducement to the use of chloroform in severe labours, is suggested by our respected friend, Dr. J. P. Batchelder, of New York.

[2] Dr. James Fountain, of Peekskill, writes, "I have seen one case only of rupture of the womb. It was the effect of a dose of *ergot.*"

In Cases CCCXLVI, CCCLXXIV, CCCCI, CCCCVIII, the peritoneum was not involved.

It appears to be a fair inference, from the above, that labours in which rupture occurs are, as a class, protracted; that the lesions of softening and thinning generally precede the rupture, and are, for the most part, a consequence of the delay; but that, in a certain proportion of cases, as in those occurring during pregnancy and early in labour, these lesions must have existed before the expulsive action of the womb was set up; while in certain other cases, rupture appears to occur in the womb unaltered by morbid changes.

We copy the *table* of *ages*, with the additions, from the new cases:—

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 16 years, | 2 patients. | 26 years, | 9 patients. | 37 years, | 8 patients. |
| 17 " | 1 patient. | 27 " | 5 " | 38 " | 8 " |
| 18 " | 1 " | 28 " | 20 " | 39 " | 1 patient. |
| 19 " | 1 " | 29 " | 3 " | 40 " | 12 patients. |
| 20 " | 5 patients. | 30 " | 24 " | 42 " | 2 " |
| 21 " | 3 " | 32 " | 15 " | 43 " | 2 " |
| 22 " | 1 patient. | 33 " | 6 " | 44 " | 4 " |
| 23 " | 1 " | 34 " | 4 " | 47 " | 1 patient. |
| 24 " | 5 patients. | 35 " | 13 " | 40–45 " | 1 " |
| 25 " | 11 " | 36 " | 17 " | | |

The largest number were at the age of 30 years.

The largest number of cases delivered under Dr. Collins' Supervision, was also at the age of 30 years; viz: 2,346 in a total of 16,414 cases.

The table showing the number of the pregnancy in which the rupture occurred:—

| No. of pregnancy | 1st | 2d | 3d | 4th | 5th | 6th | 7th | 8th | 9th | 10th | 11th | 12th | 13th | Multiparæ. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of patients | 31 | 25 | 30 | 27 | 21 | 25 | 14 | 7 | 7 | 12 | 8 | 5 | 2 | 25 |

*Symptoms of Rupture.*—The total, in which the character of the previous labour is stated, is 156. Of these

In 46, or 29.5 per cent., it was very severe.
" 39, or 25 " " strong.
" 46, or 29.5 " " moderate.
" 11, or 7 " " feeble.
" 14, or 9 " " "tedious."

In *fifty-five* the pains ceased suddenly; in *seventeen* they ceased gradually.

From this, it appears that liability to rupture is not confined to cases in which the labour is of great severity, and that it may sometimes happen when the pains from the outset are feeble. Its occurrence in the course of a labour of moderate severity, appears to be quite as common as when the pains are very severe. We have also the contrast of extensive rupture and escape of

the child with few and feeble pains, and a simple laceration of the muscular coat after labour of great severity, as in Case CCCCVIII.

The sudden cessation of the pains is one of the most characteristic symptoms of the accident; but we learn that this is not of invariable occurrence, but that, in a small proportion of cases, the cessation of pains is gradual.

Again, the *recession of the presenting part* of the child takes place, as a general rule, upon the occurrence of the accident; but the exceptions are of sufficiently frequent occurrence to deserve especial notice. Among the cases now presented, in CCCXXXIX, CCCLVII, CCCLIX, CCCXCI, CCCXCVII, CCCCX, CCCCXIII, CCCCXV, CCCCXVI it is stated that the head did not recede; and among those previously reported, there are several of which the same is affirmed. In a few, not included among these, the head remained within reach, permitting delivery by the forceps or perforation; and, in a few instances, the head did not recede until the application of the forceps was attempted.

In addition to the instances quoted before, in which the rupture was accompanied by a peculiar *sensation* experienced by the patient, the same is noted in Cases CCCXXIV, CCCXXV, CCCXXXI, CCCXXXII, CCCXXXIV, CCCXXXIX, CCCXLI, CCCXLII, CCCLVI, CCCLVIII, CCCLXIII, CCCLXIV, CCCLXVII, CCCLXXXIX, CCCXC, CCCXCV, CCCXCVIII, CCCCI, CCCCII, CCCCIX, CCCCXI, CCCCXVI.

In CCCXXVI a loud cracking noise was heard, and in Cases CCCXLII, CCCLXVII, CCCXCVI the rupture was heard by the patient or bystanders.

In CCCCXIII, CCCCXV there was no sudden acute pain, or tearing sensation. In CCCCIII, pains continued once in fifteen minutes, the patient crying out at the accession of each, but the womb empty and contracted.

Exceptions also occur to the early appearance of extreme depression after rupture, as is seen, in a remarkable degree, in Cases CCCXXXI, CCCXXXIV, CCCLXXXIV, &c.

While the cessation of the pains, the sudden outcry of the patient, and the recession of the child, followed by symptoms of great prostration, in general render the diagnosis of the accident easy, the absence of any one of these is, as we have seen, not incompatible with the existence of rupture, and the knowledge that such exceptions occasionally exist, may, in some cases, aid in the diagnosis.

*Influence of Delivery on Mortality.*—Total of all cases delivered, 207. Of these, 77 recovered, or 37 per cent.

Total of all cases undelivered, 115. Of these, 27 recovered, or 23.5 per cent.

But among the cases previously reported, were many in which the fœtus having escaped into the abdomen, was subsequently discharged after decomposition, and were reported as remarkable cases of recovery. Among the cases now related, of 26 undelivered, only three recovered, or about 11 per cent.

We repeat what was distinctly stated in our first paper, that these results

are to be regarded only as approximating the relative proportion of cases saved and lost in actual practice; since we would naturally expect to find the larger proportion of cases published to have been cases of recovery.

But, if our statistics did not clearly exhibit a diminished mortality among those delivered, they show that life is prolonged by this measure, even in cases that do not recover.

We formerly showed that the average duration of life, after rupture, with those *delivered*, was *twenty-two* hours; and that of the *undelivered*, but *nine* hours. By adding to those the new cases, we find that, of those *delivered*, *fifty-four* per cent. survived beyond *twenty-four hours;* while of those dying *undelivered*, *twenty-seven* per cent. survived beyond the same period.

*Relative success of different modes of Treatment when the Head and the whole or part of the Body has escaped into the Peritoneal Cavity.*

SUMMARY OF ALL THE CASES.

| | | | | | |
|---|---|---|---|---|---|
| Gastrotomy saved | 16, | lost | 4, or 20 | per cent. | lost. |
| Turning, &c. " | 23, | " | 50, or 68.5 | " | " |
| Abandoned " | 15, | " | 44, or 75 | " | " |

*Relative success of different modes of Treatment when the Pelvis is Contracted.*

SUMMARY OF ALL THE CASES.

| | | | | | |
|---|---|---|---|---|---|
| Gastrotomy saved | 6, | lost | 3, or 33 | per cent. | lost. |
| Perforation, &c. saved | 15, | " | 30, or 65 | " | " |
| Abandoned " | 0, | " | 11, or 100 | " | " |

Adding together these two classes, we get, as the comparative results of the different modes of treatment—

| | | | | | |
|---|---|---|---|---|---|
| Gastrotomy saved | 22, | lost | 7, or 24 | per cent. | lost. |
| Turning, perforation, &c. saved | 38, | " | 80, or 68 | " | " |
| Abandoned " | 15, | " | 55, or 78 | " | " |

*Result as effected by facility or difficulty in Delivery.*—Taking all the cases together in which this circumstance is alluded to, in *seventy* cases of *recovery*, *forty-eight* were delivered with ease, or 68.5 per cent. In *ninety-one* cases resulting in *death*, delivery was accomplished with ease in but *thirty-eight*, or 41.7 per cent.

We have included under *easy* deliveries those in which gastrotomy was performed; the term *easy* having reference to time occupied, as well as facility of execution. In all the cases of gastrotomy in which allusion is made to the point, delivery was accomplished very rapidly, and with comparatively little suffering.

If we deduct from each class just enumerated the cases of gastrotomy, we still find a preponderance of easy deliveries among recoveries, and of difficult deliveries among those who were lost. Thus, among *recoveries*, we get *twenty-six easy*, and *twenty-two difficult*, or 54 per cent. delivered with ease; and, among the deaths, *thirty-one easy*, and *fifty-three difficult;* or 37 per cent. delivered with ease.

Case CCCVIII has not been included in the enumeration of cases of gastrotomy, as the operation was peformed several weeks after the accident.

We have already discussed at some extent, in the former part of this paper, pp. 411, 412 (April 1848), the conditions under which gastrotomy commends itself as the proper resource. It is evident, we think, that this operation is now regarded with more favour by the profession than formerly; at least five cases having met our eye as reported within the last five or six years. These additional cases, in connection with those delivered by other methods, confirm in every respect the conclusions to which we arrived, after a study of the cases embodied in our first paper. Those conclusions were briefly as follows:—

1. When rupture occurs, where there is no disproportion between the pelvis and the head of the child, and the head remains in the cavity of the pelvis, the child being ascertained to be living, the careful employment of the forceps should be attempted; if the head retreat, perforation will probably be required; if the child is dead, perforation is to be preferred. An impaction of the head in the hollow of the pelvis would of course require the use of the perforator.

2. Should the fœtus have escaped into the peritoneal cavity, the feet may be sought, and the child delivered by turning, *provided there be a pelvis beyond doubt ample, a head of moderate dimensions, and the edges of the uterus uncontracted, or the rent confined chiefly to the vagina.*

3. But as contraction of the uterus almost uniformly takes place upon the escape of the child, it will prove an obstacle to delivery in almost every case of escape of the child, in which the vagina is not also involved to a very considerable degree. The performance of gastrotomy will then offer the best chance of success.

We believe that a neglect of this mode of delivery has contributed much to the exaggerated estimates of the mortality of the accident, which are so generally entertained. It is an operation requiring no little resolution and true courage under the trying circumstances in which the physician is placed, and consequently arises the need of settled principles of practice to guide one in this extremity.

Although, as we have distinctly repeated, we do not believe that our cases give the actual proportions of recoveries and deaths under any one course of management, yet we maintain that the principal circumstance which vitiates one class is the same that renders the remainder imperfect, viz: an undue proportion of recoveries; and inasmuch as we have shown that, in some respects, our statistics conform with the experience of standard authorities, and that in others they conform with acknowledged principles of general practice, we have confidence that they are worthy of a degree of reliance in elucidating points upon which we have no other standard wherewith to compare them. The relative success of gastrotomy is, as we have seen, greater than that of any other mode of delivery, and we believe that a more frequent resort to it would result in a diminished mortality to the accident. In short, *as a gene-*

*ral rule, from whatever cause we might be led to anticipate a protracted and difficult delivery by the natural passages, gastrotomy will afford the best chance of recovery.* The only exception we would make is, when there is impaction of the head in the pelvic cavity or in the inferior strait.

There is a total of twenty-four cases of *hernia of the intestine* through the rent in the womb. In Case CCCLXIV, it was of the epiploon. In Case CCCLXXXII, death was attributed to the strangulation of the bowel.

In one instance, the placenta only disappeared through the rent.

In Cases CCCXLVI, CCCLXXIV, CCCCI, CCCCVIII, the peritoneum was not involved.

Case CCCLXI was complicated by presentation of the placenta.

In Cases CCCXCVI, CCCXCIX, rupture occurred in wombs previously ruptured.

Several instances of injudicious interference, or unjustifiable violence in delivery, will be observed on a careful perusal of the cases.

Case CCCXLVII is an instance of spontaneous evolution; the head which had presented, retreating, and the feet descending within reach. Dr. Ramsbotham has observed this evolution.

In Cases CCCLXV, CCCLXVI, the womb was pierced by the foot of the child. In Case CCCLI it was pierced by the fingers of the midwife. In Case CCCLVI, rupture occurred from a fall weeks before labour came on.

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ART. IV. *Description of a Valve at the Termination of the Right Spermatic Vein in the Vena Cava, with Remarks on its Relations to Varicocele.* By JOHN H. BRINTON, M. D. (With a plate.)

THE pathology of the venous system has of late years been carefully investigated by numerous and accurate observers; and although by their efforts much light has been shed upon subjects hitherto imperfectly comprehended, there still remains much to be explained in this important class of affections.

Of all the lesions to which the veins are subject, none perhaps has attracted more attention than phlebectasis or varix. In this condition the vein is said to be varicose, its walls become unnaturally dilated, and its calibre consequently increased. The veins most frequently affected are those of the rectum, the spermatic cord, and the inferior extremity, although doubtless every portion of the venous system is liable, under certain circumstances, to become the seat of varicose dilatation.

The causes of the varicose condition of the veins are various, and are as yet not fully elucidated. The older surgeons were in the habit of invoking, as the sole cause, the existence of simple mechanical impediment to the return